

EXHIBIT E



120 FERC ¶ 61,085
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Sudeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellinghoff.

Amaranth Advisors L.L.C.

Docket No. IN07-26-000

Amaranth LLC

Amaranth Management Limited Partnership

Amaranth International Limited

Amaranth Partners LLC

Amaranth Capital Partners LLC

Amaranth Group Inc.

Amaranth Advisors (Calgary) ULC

Brian Hunter

Matthew Donohoe

ORDER TO SHOW CAUSE AND NOTICE OF PROPOSED PENALTIES

(Issued July 26, 2007)

Docket No. IN07-26-000

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1. Pursuant to section 385.209(a)(2) of the Commission's regulations¹ and the Commission's *Statement of Administrative Policy Regarding the Process for Assessing Civil Penalties*,² the Commission directs the above-captioned firms (collectively, the Amaranth Entities) and former Amaranth Entities' employees Brian Hunter and Matthew Donohoe (collectively, along with the Amaranth Entities, the Respondents) to show cause why they have not violated section 1c.1 of our regulations,³ which prohibits the manipulation of natural gas prices. We further direct the Respondents to show cause why they should not be assessed civil penalties for, and required to disgorge unjust profits plus

¹ 18 C.F.R. § 385.209(a)(2) (2006).

² See *Statement of Administrative Policy Regarding the Process for Assessing Civil Penalties*, 117 FERC ¶ 61,317, at P 7 (2006).

³ 18 C.F.R. §1c.1 (2006) (Anti-Manipulation Rule).

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interest from, these violations of almost \$300,000,000 (in total). We direct the Respondents to file with the Commission such answers within 30 days of the date of this order.

2. This case concerns the important nexus between the wholesale interstate natural gas markets subject to our jurisdiction and the New York Mercantile Exchange (NYMEX) Natural Gas Futures Contract (the NG Futures Contract). In recent years, many market participants in the physical natural gas markets have used the NG Futures Contract as a significant benchmark for prices in physical natural gas. In this case, manipulation of Commission-jurisdictional prices resulted from manipulation of the NG Futures Contract.

3. In the wake of the manipulation of prices in western energy markets during 2000-01, Congress expanded our anti-manipulation authority with the enactment of the Energy Policy Act of 2005 (EPAAct 2005).⁴ It empowered us to prohibit manipulation, not only by direct participants in the physical natural gas (or wholesale electric) markets, but also where, as here, “any entity” commits manipulation directly or indirectly, in connection with jurisdictional transactions.⁵ Moreover, recognizing the increasing importance of deterring misconduct to protect the competitiveness of energy markets, Congress substantially increased through EPAAct 2005 the remedies available to us to punish and deter violations of Commission regulations, orders, rules or policies, including increased civil penalties of up to \$1,000,000 per violation, per day.⁶

4. This case presents evidence of serious wrongdoing in violation of the new anti-manipulation proscriptions. The Respondents received multiple opportunities to present evidence and argument prior to the issuance of this order, both orally and in writing. The Commission is nevertheless preliminarily of the view that Respondents violated the Commission’s regulation as set forth in this order. The Respondents are now provided with another chance to respond.⁷ Should any such responses fail to address fully the case

⁴ EPAAct 2005, Pub. L. No. 109-58, § 315 (2005) (codified at 15 U.S.C. 717c-1).

⁵ *Id.*

⁶ EPAAct 2005, Pub. L. No. 109-58, § 314(b) (2005) (codified at 15 U.S.C. 717t-1).

⁷ Under the applicable rule, 18 C.F.R. § 385.213(c) (2006), Respondents must file answers that provide a clear and concise statement regarding any disputed factual issues and any law upon which they rely. Respondents must also, to the extent practicable, admit or deny, specifically and in detail, each material allegation of this order and set forth every defense relied upon. Upon receipt of Respondents’ answers, the Commission

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presented here, the matter will present an appropriate occasion for the first exercise of our expanded substantive regulatory authority, as well as a substantial exercise of our expanded remedial authority.

5. In this case, we preliminarily conclude that the Respondents manipulated the price of Commission-jurisdictional transactions by trading in the NG Futures Contract on February 24, March 29, and April 26, 2006, which trading was designed to produce, and in fact produced, artificial “settlement prices” (discussed more fully below) for these contracts. The evidence of the manipulation is strikingly clear. As discussed in detail *infra*, the Respondents manipulated the final, or “settlement,” price of the NG Futures Contract on the above dates by selling an extraordinary amount of these contracts during the last thirty minutes of trading before these futures contracts expired. Respondents did so with the purpose and effect of driving down the settlement price. Considered in isolation, this trading would be economically irrational because by driving down the settlement price, Amaranth made less on the sales of these contracts. However, Amaranth had previously taken positions several times *larger* in various financial derivatives whose value *increased* as a direct result of the decrease in the settlement price of the NG Futures Contract. Thus, for every dollar lost on its sales of the NG Futures Contract, it would gain several dollars on its derivative financial positions. The motive for Amaranth’s manipulative scheme thus supplied, Respondent Hunter (Amaranth’s head energy trader) observed that he just needed the NG Futures Contract settlement price to “get smashed on settle” as he put it in one of many “instant messages” or IMs revealed in staff’s investigation.⁸

6. Moreover, Amaranth and its traders Hunter and Donohoe intentionally manipulated the settlement price of the NG Futures Contract knowing that the NG Futures Contract settlement price is explicitly used to price a substantial volume of Commission-jurisdictional natural gas transactions (namely, “physical basis” transactions, described below, and the various monthly indices that are calculated using physical basis transactions). As Amaranth has acknowledged, the “public relies on [the settlement price of the NG Futures Contract] as a key price benchmark for physical and financial contracts involving natural gas” and that the manipulation of this price can harm

has many options as to how to proceed. It may issue an order on the merits, request briefs or set specified issues for a trial-type hearing, with full discovery, before an administrative law judge (ALJ), request a recommendation or report from an ALJ, or provide for any other process that would justly and efficiently resolve the matter.

⁸ AALLC_REG0684186 (Instant Message from Hunter to Amaranth trader Matthew Calhoun, February 24, 2006).

“all natural gas market participants, including consumers whose cost of natural gas most certainly [is] tied” to the settlement price.⁹ Accordingly, the Respondents intentionally or recklessly manipulated prices in connection with Commission-jurisdictional transactions, and thus violated the Commission’s Anti-Manipulation Rule.

7. Amaranth’s manipulative scheme began, as Hunter stated in another IM, as “a bit of an experiment [sic]”¹⁰ devised by Hunter on or before February 23, 2006, the day before the first manipulation occurred. The February 24 “experiment” was repeated and refined on March 29 and April 26. Ultimately, and notoriously, Amaranth experienced massive trading losses in the fall of 2006 and ceased investment operations. While related to Amaranth’s overall natural gas portfolio, that failure is not directly tied to the manipulations and, as discussed more fully *infra*, this matter was initiated by Commission staff on a non-public basis well before those losses and collapse.

8. By granting the Commission enhanced civil penalty and anti-manipulation authority in EPCA 2005, Congress gave us a clear mandate to punish such gaming of the energy markets that are subject to our jurisdiction, particularly where, as here, the manipulation harmed all market participants. Based on all the facts and circumstances, including the serious nature of the violations and the absence of any material mitigating factors, we preliminarily conclude that it would be appropriate to order severe civil penalties of \$200,000,000 in the case of the Amaranth Entities, \$30,000,000 in the case of Hunter, and \$2,000,000 in the case of Donohoe, as well as disgorgement of substantial unjust profits from the Amaranth Entities of over \$59,000,000 plus interest.

I. BACKGROUND

A. The Relevant Markets

9. The manipulation in this case involves three distinct but interrelated markets: (1) the NG Futures Contract market, which contracts are traded exclusively on NYMEX; (2) a variety of “derivative” financial products, most of which are termed “swaps” (some traded on NYMEX, some “over the counter” (*e.g.*, on Intercontinental Exchange, Inc. (ICE)), and all of which derive their value based on the “settlement price” of the NG Futures Contract for a given month; and (3) Commission-jurisdictional wholesale natural

⁹ AMARANTH_REG_054783-84 (Letter from Amaranth to NYMEX, August 30, 2006).

¹⁰ AALLC_REG0684227 (Instant Message from Hunter to “gloverb”, February 24, 2006). Hereinafter, “experiment” will generally be correctly spelled as “experiment.”

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gas sales, namely, wholesale natural gas sales in interstate commerce that are not “first sales” within the meaning of the Natural Gas Policy Act of 1978 (NGPA).¹¹ The first market affects the second and third inasmuch as the NG Futures Contract settlement price determines, in whole or in part, the value of the derivatives and the price of a substantial volume of Commission-jurisdictional wholesale natural gas sales.

1. The NG Futures Contract

10. The NG Futures Contract is a contract for the future delivery of 10,000 MMBtu of natural gas over the course of the contract month to the buyer’s interconnection on the Sabine Pipe Line Co.’s Henry Hub in Louisiana.¹² The NG Futures Contract market provides important benefits to the physical natural gas markets. Highly liquid trading of the NG Futures Contract is driven by sophisticated participants who study the fundamentals that affect future natural gas prices such as weather, storage, injections, withdrawals, production and the like. Tens of thousands of prompt-month contracts are traded on a daily basis, with trading volume increasing as the time to maturity decreases. As a result, many market participants view NG Futures Contract pricing as a reliable price signal for the purpose of transacting or planning for natural gas sales. The market also allows physical natural gas market participants to hedge against risks of future price volatility on their fixed contract obligations.

a. Trading in the NG Futures Contract

11. During the relevant time period (early 2006), the NG Futures Contract was principally traded in an “open outcry” market on the NYMEX trading floor located in the financial district in New York, New York. It is an open and continuous auction by NYMEX members who are acting on behalf of their customers, the brokerage companies they represent, or themselves.¹³ It is referred to as “open outcry” because, instead of a

¹¹ 15 U.S.C. § 3431(a) (2000).

¹² See NYMEX Exchange Rulebook §§ 220.05, 220.10-12 (“Natural Gas Futures Contract”), available at http://www.nymex.com/rule_main.aspx?pg=33.

¹³ The following description of NYMEX floor trading is based largely on the summary provided on the NYMEX website: http://www.nymex.com/how_exchang_works.aspx. Electronic trading on the NYMEX is currently eclipsing trading in the open outcry pit; in January 2007, NYMEX volume on the CME Globex electronic trading platform for the first quarter 2007 was 597,000 contracts per day, while the NYMEX floor-traded average daily volume was 330,000 contracts per day. NYMEX, *NYMEX Reports Record First Quarter 2007 Volume of* (continued)

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single auctioneer selling an item, every member on the floor can shout out bids (*i.e.*, prices at which they are willing to buy a contract) or offers (*i.e.*, the prices at which they wish to sell a contract), in what may appear to be a somewhat chaotic and disorganized process. At some times, there may be one hundred or more traders on the floor or “pit,” yelling and gesturing all at the same time as they struggle to find counterparties and fulfill their client’s orders.

12. In fact, the seemingly chaotic NYMEX “pit” is an efficient market clearing environment. The NYMEX floor traders, normally wearing jackets with distinctive colors to identify themselves or the brokerage company for which they work, stand in the trading rings or pits on the trading floor, which are arranged like little amphitheatres with wide steps descending to the center. Brokers’ phone clerks, who are outside the trading pit area, take orders from customers and typically record those orders on small slips of paper, noting the volume of the order, the terms requested and any other information pertinent to the execution of the order. Another broker employee may physically deliver the orders to the floor traders in the ring, or the orders may be verbally transmitted to the floor broker. Floor traders who wish to accept a bid or offer do so by shouting at and gesturing (using well known pit gestures) to the trader making the bid or offer. Experienced traders can detect in real time the status and direction of pricing and volumes by visually and audibly monitoring the trading behavior of other brokers in the ring. Importantly, for purposes of this case, and as discussed more fully below, when a floor broker with a large order to sell begins to offer to sell contracts serially and in rapid succession, and other brokers quickly accept or “lift” the offers, experienced brokers who may have orders to buy will perceive the intentions of the large seller. Rather than bidding at prevailing prices and having sellers “hit” their bids, they will wait for the large seller to offer at a lower price and then “lift” those offers at such lower prices. In such a manner, the large seller can (intentionally or unintentionally) move the prevailing prices in the ring in a downward direction.

13. When a trade is executed, each selling broker must record each transaction on a card about the size of an index card which shows the commodity, quantity, delivery month, price, broker’s badge name and badge name of the buyer. The pit card must be tossed (physically) into the center of the trading ring within one minute of the completion of a transaction. A NYMEX employee sits in the center of the trading ring, collects and time-stamps the cards, and the data on the card is then entered into a NYMEX central

1.512 Million Contracts Per Day, Up 40 Percent From 2006 Period; Record March Volume Averaged 1.372 Million Contracts Per Day (Apr. 3, 2007),
<http://investor.nymex.com/releasedetail.cfm?ReleaseID=236556>.

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computer system. In addition, most brokers will record the essential terms of the execution on the same slips of paper their firms created with respect to the client orders.

b. NG Futures Contract Settlement Price

14. The NG Futures Contract “settlement price” is the volume-weighted average price of trades made during the 30-minute “settlement period,” which is the last 30 minutes of trading on the termination day for the “prompt-month” contract. The “prompt-month” is the next calendar month. The “termination day” for the NG Futures Contract is the third-to-last business day of the month preceding the prompt month, and the settlement period occurs from 2:00 p.m. to 2:30 p.m. on the termination day (except when the NYMEX is operating on a holiday schedule). So, for example, for August 2007, the prompt-month contract is the September 2007 NG Futures Contract. The last business day for August 2007 is Friday, August 31, so the settlement period for the September 2007 NG Futures Contract will take place from 2:00 p.m. to 2:30 p.m. on Wednesday, August 29, 2007.

15. A few futures market participants hold their positions to the end of the settlement period for the prompt-month contract, and thus are obligated to “go to delivery.” That is to say, the “futures” contract for the prompt month becomes a present contractual obligation for the purchase and sale of the physical gas. Longs must take delivery and shorts must make delivery of 10,000 MMBtu per contract over the course of the contract month, at the buyer’s interconnection on the Sabine Pipe Line Co.’s Henry Hub in Louisiana.¹⁴ As noted above, the price for the gas that goes to delivery is the settlement price of the NG Futures Contract.¹⁵ However, it should be noted that the vast majority of NG Futures Contracts do not in fact go to delivery. For the contract months in question, the height of open interest¹⁶ during the life of the contracts was 103,552 for the March

¹⁴ See NYMEX Exchange Rulebook §§ 220.10-12, *available at* http://www.nymex.com/rule_main.aspx?pg=33.

¹⁵ See NYMEX Exchange Rulebook § 220.11(D), *available at* http://www.nymex.com/rule_main.aspx?pg=33.

¹⁶ “Open Interest” is the total number of futures contracts long or short in a delivery month or market that has been entered into and not yet liquidated by an offsetting transaction or fulfilled by delivery. CFTC Glossary, http://www.cftc.gov/opa/glossary/opaglossary_o.htm. Thus, as the clock is winding down during the settlement period, the open interest (both in terms of the total number of contracts and the number of counterparties) is rapidly decreasing, so that a given number of contracts will represent an increasing share of the outstanding prompt-month contracts.

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Contract, 82,372 for the April Contract, and 109,265 for the May Contract,¹⁷ while only the following number of contracts went to delivery: 1,697 for March (1.6 percent of largest open interest), 1,230 for April (1.5 percent of largest open interest), and 1,748 for May (1.6 percent of largest open interest).¹⁸

16. Most market participants prefer to *avoid* trading during the settlement period. As the time to termination is winding down, price risk and volatility may increase, while market liquidity and the remaining open interest are decreasing. Most market participants liquidate or “roll” (meaning that they transfer their position into later contract months) their open long or short positions in the prompt-month NG Futures Contract well before the settlement period. A small number of floor brokers known as “locals”¹⁹ trade on their own account. For locals, these price and liquidation risks are less prominent because they trade in the ring on their own information (as opposed to clients who may be calling in orders). They can perceive the market movements in real time and trade, in the moment, on these market movements, buying and selling in the closing minutes to earn profits here and there on individual trades – and providing liquidity as the contract proceeds to termination.²⁰ As will be seen *infra*, however, some locals also act as brokers for large institutional clients.

2. NG Futures Contract Settlement Price Effects on Derivatives

17. The NG Futures Contract final settlement price sets, in whole or in part, the settlement price for a wide range of natural gas derivatives, including financially-settled natural gas futures “swaps” and “basis swaps.”²¹ Certain “options” can also settle on the final NG Futures Contract settlement price.

¹⁷ NYMEX NG Futures Contract trade data, *available at* FutureSource, NGH06, NGJ06, NGK06, <http://www.esignal.com/futuresource>.

¹⁸ NYMEX_00031 (NYMEX NG Futures Contract data).

¹⁹ See NYMEX Frequently Asked Questions, <http://www.nymex.com/faq.aspx>.

²⁰ See, e.g. Bolling Dep. 34:18-23 (June 29, 2007).

²¹ A “basis swap” is a derivative instrument whose value is based on the difference between the settlement price of the NG Futures Contract for a given contract month and that of the monthly “index” at a specified location for that same month. See, e.g., NYMEX Exchange Rulebook § 521.02 (“NYMEX Transco Zone 6 Basis Swap (Platts IFERC) Contract”):

(continued)

18. A natural gas futures “swap” (swap) is a purely financial instrument that operates much like the NG Futures Contract except that, rather than becoming a physical delivery or purchase obligation, it settles financially at the termination of the NG Futures Contract at the NG Futures Contract’s final settlement price. Financial swaps do not entail physical delivery risk. The buyer in a swap transaction for a given contract month agrees to pay the seller a “fixed price,” *i.e.*, a specific amount determined at the time when the transaction occurs. The seller pays the buyer a “floating price,”²² which will be the actual final settlement price for the NG Futures Contract and which is not known at the time of the swap transaction. Thus, buyers and sellers hope to profit based on the relation between the price paid at the time of the transaction and the ultimate settlement price of the NG Futures Contract: the buyer of the swap profits if the floating price (*i.e.*, the actual final NG Futures Contract settlement price) is higher than the fixed price at which the swap is trading at the time that the transaction takes place; the seller profits if the floating price is lower than the fixed price.

The Floating Price for each contract month will be equal to the Platts Inside FERC’s Gas Market Report (‘Platts IFERC’) Transco Zone 6 Index (‘Index’) published in the table titled ‘Market Center Spot-Gas Prices’ in the first regular issue of the contract month minus the NYMEX (Henry Hub) Natural Gas Futures contract final settlement price for the corresponding contract month.

available at http://www.nymex.com/rule_main.aspx?pg=90. As discussed in more detail below, a monthly index price is normally calculated based on the volume-weighted average price of fixed-price and/or physical basis transactions executed during “bid week,” which is the last five business days of the month.

²² See, *e.g.*, NYMEX Exchange Rulebook § 508.02 (“Henry Hub Swap Futures Contract”) (“The Floating Price [*i.e.*, the final settlement price of the swap] for each contract month will be equal to the NYMEX (Henry Hub) Natural Gas Futures contract final settlement price for the corresponding contract month on the last trading day for that contract month.”), *available at* http://www.nymex.com/rule_main.aspx?pg=77. Similarly, for the ICE natural gas swap, the floating price is “the monthly last settlement price for natural gas futures as made public by the New York Mercantile Exchange (NYMEX) for the month of production.” ICE, Product Details for Natural Gas Swap, Fixed for NYMEX LD1, *available at* <https://www.theice.com/productguide/productDetails.do?productId=53&productId=1093&display=>.

19. A natural gas futures “option” is a contract that gives the buyer the right, but not the obligation, to buy or sell a specified quantity of futures for a particular contract month at a specific price within a specified period of time, regardless of the futures market price. If an option is exercised, or “assigned,” a futures position is established. Like all futures, a future created from an option can be liquidated by making an offsetting purchase or sale, or can go to delivery. An option can be either a “call” or a “put.” The buyer of a natural gas futures “call” option traded on NYMEX has the right, but not the obligation, on the expiration day²³ to purchase one NG Futures Contract at the “strike price,” which is a price specified at the time the option is written.²⁴ Conversely, the seller (or “writer”) of the call has the obligation to sell one NG Futures Contract at the strike price to the buyer of the call, in the event the option is exercised. Similarly, the buyer of a “put” option has the right, but not the obligation, on the expiration day to sell one NG Futures Contract at the strike price, while the writer (seller) of the put has an obligation to buy one NG Futures Contract at the strike price from the buyer upon exercise. In either case, the buyer of the put or call makes an initial payment to the writer of the put or call, referred to as the option premium. Traders can also buy and sell options on purely financial contracts, such as swaps. As with the other natural gas derivatives described above, the price of the NG Futures Contract has a direct relationship to the value of options. The NG Futures Contract is a basic component that determines the value of the options. While options on prompt-month futures and other derivatives expire on the day before termination day, trading during the settlement period on termination day continues to affect the value of options on future-month instruments. Trading during the last two minutes on the termination day is particularly important, as options continue to trade at prices in relation to the price of the expiring NG Futures Contract. As discussed more fully below, options and other derivatives are given a non-final settlement price based on trading during these two minutes, which determines the options’ marked-to-market²⁵ value for that day.

²³ There are various option expiration days, depending on the terms of the particular option instrument in question. This discussion will be limited to the NYMEX natural gas option, which expires the day before the termination day for the NG Futures Contract for that month, *i.e.*, the fourth-to-last business day of the month.

²⁴ There will normally be a range of strike prices for each put and call of a given contract month, separated by \$0.25 or \$0.50 intervals. For example, an August call with a strike price of \$5 would be identified as simply the August \$5 call.

²⁵ Marked-to-market values represent the gains or losses in each contract position resulting from changes in the price of the futures or option contracts at the end of each

(continued)

3. NG Futures Contract Settlement Price Effects on Prices in Commission-Jurisdictional Transactions

20. Importantly, from the perspective of our jurisdiction, the NG Futures Contract settlement price determines the price of a substantial proportion of Commission-jurisdictional transactions, most directly, “physical basis” transactions. A physical basis transaction is a contract for delivery of natural gas at some location in the wholesale natural gas delivery system that spans the nation. The price of a physical basis transaction is the NG Futures Contract settlement price for a given month, plus or minus a fixed amount representing the expected “basis” (or differential for delivery at the delivery location versus Henry Hub) at the time of the transaction.²⁶ Consequently, any manipulation of the NG Futures Contract settlement price will inevitably result in a penny-for-penny change in the prices used in physical basis transactions.

21. A second, and larger, category of Commission-jurisdictional transactions that rely to a great degree on the NG Futures Contract are “index” transactions. Monthly price indices are compiled and published by several trade press entities (*e.g.*, Platts or NGI) who obtain information provided on a voluntary basis by market participants about trades occurring at various physical natural gas trading locations.²⁷ Monthly indices are normally calculated based on the volume-weighted average price of fixed-price and/or physical basis transactions executed at such locations during “bid week,” which is the last five business days of the month. As such, the NG Futures Contract settlement price is included in the calculation of indices for locations where bid week physical basis trades are reported to publishers.

22. Figure 1 below shows that high percentages of bid week transactions at index points in the East, Mid-Continent, and producing regions along the Gulf coast are physical basis transactions. Consequently, monthly indices at these locations are set primarily by physical basis transactions that explicitly use the NG Futures Contract

trading session. See CFTC Glossary, http://www.cftc.gov/opa/glossary/opaglossary_m.htm.

²⁶ So for example, if gas for delivery to Transco Zone 6 (*i.e.*, New York) during August 2007 is expected to be \$1 greater than gas delivered to Henry Hub for that month, a physical basis trade for the prompt month would be the settlement price of the August 2007 NG Futures Contract settlement price, plus one dollar.

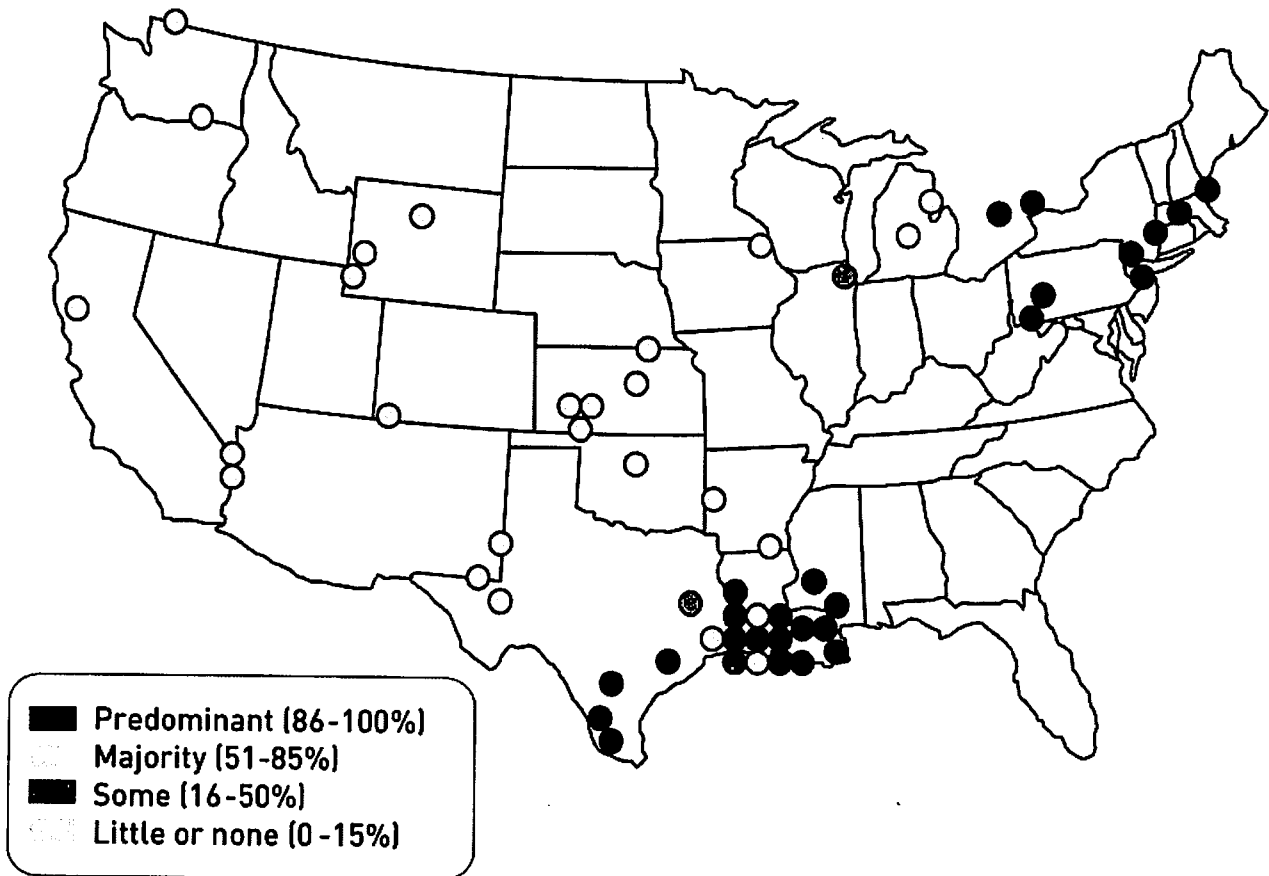
²⁷ See generally *Policy Statement on Natural Gas and Electric Price Indices*, 104 FERC ¶ 61,121 (2003), *clarification granted*, 105 FERC ¶ 61,282 (2003).

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settlement price as a reference price. If the NG Futures Contract settlement price is rendered artificial due to manipulation, this artificial price element will be directly transmitted into index prices to the extent that they are calculated using physical basis transactions.

Figure 1: Use of Physical Basis in Natural Gas Price Indices at Major Trading Points, 2006²⁸



23. The price indices that rely heavily on physical basis transactions, in turn, are widely used in bilateral natural gas markets as a price term. According to a report prepared by the American Gas Association (AGA), a trade group for natural gas local distribution companies (LDCs), “it is clear that first-of-the-month index pricing [*i.e.*,

²⁸ FERC, *2006 State of the Markets Report* at 50 (2007), available at <http://www.ferc.gov/market-oversight/st-mkt-ovr/st-mkt-ovr.asp>.

monthly indices] dominates the market for long- and mid-term supply agreements.” This report surveyed 30 LDCs and made the following findings: (i) for long-term gas purchases (one year or more), 20 of 22 responding companies used monthly indices, with 13 of those companies using monthly indices for 51 to 100 percent of their long-term purchases; (ii) for mid-term purchases (more than one month, less than one year), 24 of 29 respondents used monthly indices, with 15 of those companies using monthly indices for 51 to 100 percent of their purchases; (iii) for short-term purchases (less than one month), 19 of the respondents used monthly indices; and (iv) 26 of 29 respondents used monthly indices to buy gas for storage injection, with 11 of those companies using monthly indices for 76 to 100 percent of their storage gas.²⁹ The AGA report further found that several of these LDCs used the NYMEX price itself for supply agreements: (i) four of the 22 respondents to this question used NYMEX for long-term supply agreements; (ii) seven of the 29 respondents used NYMEX for mid-term supply agreements, with three of these using it for 76 to 100 percent of their purchases; (iii) seven of the 29 respondents used NYMEX for short-term pricing (less than one month), with five of these using it for 51 to 100 percent of their purchases; and (iv) three of the 29 respondents used NYMEX to buy gas for storage injection.³⁰

24. In addition to market participants relying on the NG Futures Contract settlement price, or on indices that substantially report prices based on the settlement price, regulators at the state level sometimes look to index or settlement price-based purchases of natural gas by LDCs in evaluating whether such purchases were prudent. Accordingly, LDCs naturally have increasingly come to rely on such prices in satisfying themselves that their purchases will pass regulatory scrutiny.

25. Jurisdictional sellers of natural gas are not required to report their sales to the Commission. While we have issued a Notice of Proposed Rulemaking to require future annual reporting of aggregate physical natural gas sales,³¹ pursuant to the transparency provisions of EPCA 2005,³² we cannot, nor need we, determine at this time the precise

²⁹ AGA, *LDC Supply Portfolio Management During the 2005-2006 Winter Heating Season* at 3-5, 11 (2006).

³⁰ *Id.* at 11-14, 17.

³¹ Notice of Proposed Rulemaking, *Transparency Provisions of Section 23 of the Natural Gas Act; Transparency Provisions of the Energy Policy Act of 2005*, 72 Fed. Reg. 31,217 (June 6, 2007), FERC Stats. & Regs. ¶ 32,614 (2007).

³² EPCA 2005 § 316 (codified at 15 U.S.C. § 717t-2).

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volume or proportion of total “jurisdictional” gas transactions that are priced using physical basis or that are sold at index prices determined, in whole or in part, by physical basis trades. We have a variety of indications that the volume is substantial. For example, as discussed at our October 13, 2006 Technical Conference on Price Transparency, numerous blanket market certificate sellers have notified the Commission that they report their sales to indices, including sellers like BP, ConocoPhillips, Sempra, Coral, and Chevron. Given the proportion of the index transactions that are physical basis, it stands to reason that these jurisdictional sellers are selling a large proportion of physical basis. In addition, monthly wholesale physical gas transactions executed on ICE during 2006 indicate that there were over 747 Bcf of wholesale physical basis transactions during this period. The following volumes of physical basis trades were executed on ICE at major Eastern, Mid-Continent, and Gulf Coast trading hubs: Columbia Gas TCO Pool (Appalachia) – 92.8 Bcf; TETCO-M3 (Eastern Texas) – 76.7 Bcf; Dominion South (Mid-Atlantic) – 76.1 Bcf; Transco Z6 (New York) – 52.9 Bcf; Centerpoint-East (Mid-Continent) – 39.4 Bcf.³³

26. As noted, an additional category of Commission-jurisdictional transactions whose price is determined by the NG Futures Contract settlement price are those NG Futures Contracts that “go to delivery.” During the months of interest, blanket certificate holders such as BP, Louis Dreyfus, UBS, Merrill Lynch, and ConocoPhillips each sold natural gas by taking NG Futures Contracts short through expiration in one or more of the months for a total of over 2,000 contracts for approximately 20 Bcf of physical gas that went to delivery.³⁴

27. The natural gas sold as a result of the aforementioned processes represents substantial wholesale sales for resale in interstate commerce that are not first sales. Consequently, they are subject to the Commission’s jurisdiction, and manipulation of the NG Futures Contract Settlement price will necessarily change the price in these transactions by corresponding amounts.

³³ ICE, End of Day Reports – OTC (natural gas firm physical basis swaps), available at https://www.theice.com/eod_valuation.jhtml.

³⁴ NYMEX_00029 (NYMEX open interest, trade, and delivery data).

B. The Respondents

1. The Amaranth Entities

28. The Amaranth Entities collectively comprise what is commonly referred to as a “hedge fund.” On paper, they consist of a complex array of interrelated LLCs, LLPs, and corporations,³⁵ organized for the purpose of pooling and investing funds of investors. They include “Amaranth Advisors L.L.C.,” which is the “Advisor” to a number of “Funds,” which in turn hold the capital contributed by investors, as discussed more fully *infra*.

29. The principal “Fund” is Amaranth LLC, a Cayman Islands company. Amaranth LLC is a multi-strategy trading fund advised by Amaranth Advisors L.L.C. and its affiliates. Amaranth LLC serves as a “master fund” in a “master-feeder” fund structure. Investors invest directly into three feeder funds (Amaranth International Limited, Amaranth Partners LLC, and Amaranth Capital Partners LLC), which invest substantially all of their capital in Amaranth LLC.³⁶ Amaranth LLC then invests its funds on a global basis in a host of trading vehicles. Amaranth LLC currently possesses substantial assets related to the operation of the Amaranth Entities.

30. Amaranth Group Inc. is a Delaware S corporation owned 100 percent by Amaranth LLC CEO Nicholas Maounis (Maounis). As of May 1, 2006, Amaranth Group Inc. owned one percent and served as general partner of Amaranth Management Limited Partnership, a Delaware holding entity, which entity in turn owned 78 percent of Amaranth Advisors L.L.C. Amaranth Group Inc. employed all the natural gas traders, including Brian Hunter, Matthew Donohoe, as well as the executives such as the President and Chief Investment Officer (CIO) Maounis, Chief Risk Officer (CRO) Robert Jones, and Chief Compliance Officer (CCO) Michael Carrieri. Amaranth Group Inc. is a service provider to the Amaranth Funds.

31. Amaranth International Limited is a Bermuda company. Amaranth International Limited serves as an off-shore “feeder fund” for non-United States and tax-exempt investors, in the “master-feeder” fund structure. Investors invest directly into Amaranth International Limited, which invests substantially all of its capital in Amaranth LLC.

³⁵ AMARANTH_REG000049-61 (thirteen pages of Amaranth Organizational Charts).

³⁶ AALLC_REG0343320 (Amaranth LLC Financial Profile, January 2006).

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32. Amaranth Partners LLC and Amaranth Capital Partners LLC are Delaware Limited Liability Companies. They both serve as a domestic “feeder fund” for United States taxable investors, in the “master-feeder” fund structure. Investors invest directly into these entities, which then invest substantially all of their capital in Amaranth LLC.

33. Amaranth Advisors (Calgary) ULC is a Nova Scotia, Canada company, registered with the Alberta Securities Commission, that Amaranth established as an energy advisor entity to allow Hunter and his team to move their trading operation from Greenwich, Connecticut to Calgary, Alberta (as discussed more fully *infra*). Hunter was the President, though most of the other officers were based in Greenwich, as were the other Amaranth employees assigned to perform support functions for the Calgary trading operation. Amaranth Advisors (Calgary) ULC is an indirect subsidiary of Amaranth Advisors L.L.C.

34. At the close of 2005, the Amaranth Entities employed over 600 people in Amaranth’s Greenwich, Connecticut headquarters and seven other offices worldwide and controlled in excess of \$8 billion in assets. In September 2006, Amaranth experienced significant losses from its natural gas positions that ultimately resulted in the pending and well-publicized dissolution of the firm.³⁷ Although Amaranth trading operations ceased in 2006, at present the assets of the Amaranth Entities exceed \$600,000,000.³⁸

2. The Traders

35. Brian Hunter, a Canadian citizen, was the head natural gas trader at Amaranth, stationed in a Calgary, Alberta office during the period in which the manipulative trading occurred. After holding various energy trading positions at TransCanada and Deutsche Bank, he joined Amaranth as an energy trader in 2004 in Greenwich and became a Portfolio Manager for Energy Trading in 2005. At about the time he joined Amaranth, it seems to have become generally known that he had left Deutsche Bank on unfavorable terms, including being taken off of the trading desk.³⁹ His troubles with Deutsche Bank

³⁷ We note, in passing, that we have found no evidence indicating these fall 2006 losses were connected to Respondents’ manipulative trading in the NG Futures Contract in early 2006 and also that staff’s monitoring activities and investigation that resulted in this order began well before Amaranth’s losses and the publicity, Congressional interest, and private litigation that ensued.

³⁸ Letter from Maounis to Amaranth Investors (Mar. 29, 2007).

³⁹ See Ann Davis, *How Giant Bets on Natural Gas Sank Brash Hedge-Fund Trader*, WALL ST. J., Sept. 19, 2006, at A1, available at

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eventually erupted publicly with the filing of a lawsuit against the firm blaming alleged performance problems on faulty Deutsche Bank systems and management. He left Amaranth sometime in late 2006 after the losses discussed above.

36. Matthew Donohoe was Hunter's "execution trader" at Amaranth. According to Donohoe, Hunter would "direct macro strategy, and [Donohoe] would implement it via trading."⁴⁰ As such, Donohoe would place the orders with NYMEX floor brokers or execute trades with counterparties on behalf of Hunter's trading book. He also left Amaranth after the fall 2006 losses.

3. The Trading Operation

37. Hunter was hired in 2004 by Maounis and Harpreet "Harry" Arora, a former Enron trader who had established Amaranth's energy and commodities trading desk. Hunter apparently grew to dislike reporting to Arora and to resent the way Hunter was compensated by Amaranth.⁴¹ During the summer of 2005, Hunter threatened to leave Amaranth and went so far as to sign a contract with another firm.⁴² In order to retain Hunter, Maounis allowed Hunter to manage a trading book separate from Arora's, focused on natural gas futures and derivatives.⁴³ Maounis also eventually promoted Hunter to Vice President reporting directly to Maounis, made Hunter "co-head" with Arora of commodities trading at Amaranth, and enhanced Hunter's "desk participation" (*i.e.*, his share of his trading desks profits) from 7.5 percent to 15 percent.⁴⁴ Hunter

http://online.wsj.com/article_email/SB115861715980366723-1MyQjAxMDE2NTE4OTYxMTk3Wj.html; *see also* Maounis Dep. 54:9-55:16 (Nov. 20, 2006 late afternoon session); Hunter Dep. 52:9-53:2 (Nov. 16, 2006).

⁴⁰ Donohoe Dep. 17:21-18:2 (Mar. 14, 2007 morning session).

⁴¹ Maounis Dep. 14:2-15:3 (Nov. 20, 2006 morning session).

⁴² Hunter Dep. 21:5-22:3 (Nov. 16, 2006); Maounis Dep. 26:6-27:20 (Nov. 20, 2006 late afternoon session).

⁴³ Hunter Dep. 21:5-10, 24:9-22 (Nov. 16, 2006); Maounis Dep. 15:13-16 (Nov. 20, 2006 morning session).

⁴⁴ Maounis Dep. 28:4-7 (Nov. 20, 2006 late afternoon session); Arora Dep. 16:21-25 (Nov. 14, 2006 morning session), 33:18-20 (Nov. 14, 2006 afternoon session); A_CFTC000052; *see also* AMARANTH_REG003387-3402 (Letter from Amaranth to Hunter, dated June 1, 2005, summarizing his compensation package).

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made roughly \$1 billion for Amaranth in 2005, largely from trading around the periods when Hurricanes Katrina and Rita sent natural gas prices soaring, and received total compensation of roughly \$100 million.⁴⁵ Subsequently, Amaranth allowed Hunter to increase the size of his natural gas positions (so that Amaranth allocated well over *half* of its risk capital to its energy book by the Summer of 2006).⁴⁶

38. On August 23, 2005, shortly after Amaranth allowed Hunter to split his book from Arora's, Amaranth submitted an application to NYMEX for an exemption from NYMEX's position limits for trading in the NG Futures Contract and the Henry Hub Swap Contract (or NN Contract).⁴⁷ Specifically, Amaranth requested that its position limits be raised from 1,000 NG Futures Contract equivalents to 3,000 NG Futures Contract equivalents. In its request, Amaranth emphasized the high priority that it placed on risk management and that it had "assigned a risk manager to sit among its energy traders."⁴⁸ On September 16, 2005, NYMEX substantially granted Amaranth's exemption request.⁴⁹ This exemption, in part, positioned Hunter for the extensive trading in the settlement period that was to come.

39. In late 2005, Amaranth allowed Hunter to move his trading desk to Calgary, his hometown.⁵⁰ At first, Hunter was alone in Calgary, though eventually, four other Amaranth natural gas traders migrated there from Greenwich over the course of the Spring and Summer of 2006 (specifically, Matthew Donohoe, Matthew Calhoun, Shane Lee, and Brad Basarowich). Notably absent in Calgary were Amaranth senior

⁴⁵ Maounis Dep. 27:21-24 (Nov. 20, 2006 late afternoon session); Ann Davis, *How Giant Bets on Natural Gas Sank Brash Hedge-Fund Trader*, WALL ST. J., Sept. 19, 2006, at A1, available at http://online.wsj.com/article_email/SB115861715980366723-1MyQjAxMDE2NTE4OTYxMTk3Wj.html.

⁴⁶ See, e.g., AALLC_REG0767207-28, AALLC_REG0605202, AALLC_REG0550756, AALLC_REG0609346, AALLC_REG0611335 (series of documents Amaranth provided to investors outlining the percentage of risk capital allocated by strategy).

⁴⁷ A_CFTC000051-56.

⁴⁸ A_CFTC000052-53.

⁴⁹ A_CFTC000057.

⁵⁰ Maounis Dep. 15:7-17:11 (Nov. 20, 2006 morning session).

management, risk management, or compliance personnel,⁵¹ contrary to the aforementioned representations Amaranth made to the NYMEX to obtain position limit exemptions.

40. By early 2006, Hunter was in his ascendancy within Amaranth and by March 2006, Arora had left Amaranth to work at another hedge fund. It is clear that Arora and Hunter had different views on trading, in particular, trading NG Futures during the settlement period. As do most participants in the NG Futures market, Arora sought to exit his position in the expiring “prompt-month” NG Futures as early as possible to avoid the risks of trading in the settlement.⁵² Indeed, Amaranth did not trade large volumes of prompt-month contracts on the settlement day until after Hunter had been made a Co-Portfolio Manager for commodities trading. In the months leading up to Arora’s departure, Arora expressed concerns to Amaranth CRO Jones and Maounis about Hunter’s natural gas trading.⁵³ But, Hunter’s energy trading book had been “an enormous source of profitability in 2005.”⁵⁴ Moreover, energy trading accounted for 98 percent of Amaranth’s 2005 profits, primarily from natural gas derivatives.⁵⁵ Thus it appears Amaranth senior management took a rather hands off approach to overseeing Hunter’s trading operation (at least until May 2006). As we will discuss in more detail *infra*, Amaranth senior management’s handling of the trading operation factors significantly into our overall view of this matter.

C. Trading in the March, April, and May 2006 NG Futures Contract

41. There are three NG Futures Contracts and their respective settlement days in 2006 – February 24, March 29, and April 26 – that are the subject of this order. The specific manipulative trading activity by Amaranth will be detailed further *infra*, but here it is

⁵¹ Maounis Dep. 17:22-21:5 (Nov. 20, 2006 morning session).

⁵² Arora Dep. 19:20-20:9 (Nov. 14, 2006, afternoon session).

⁵³ Jones Dep. 38:15-41:4 (Nov. 13, 2006 morning session); Arora Dep. 25:4-29:4 (Nov. 14, 2006 morning session).

⁵⁴ Jones Dep. 71:17-20 (Nov. 13, 2006 morning session).

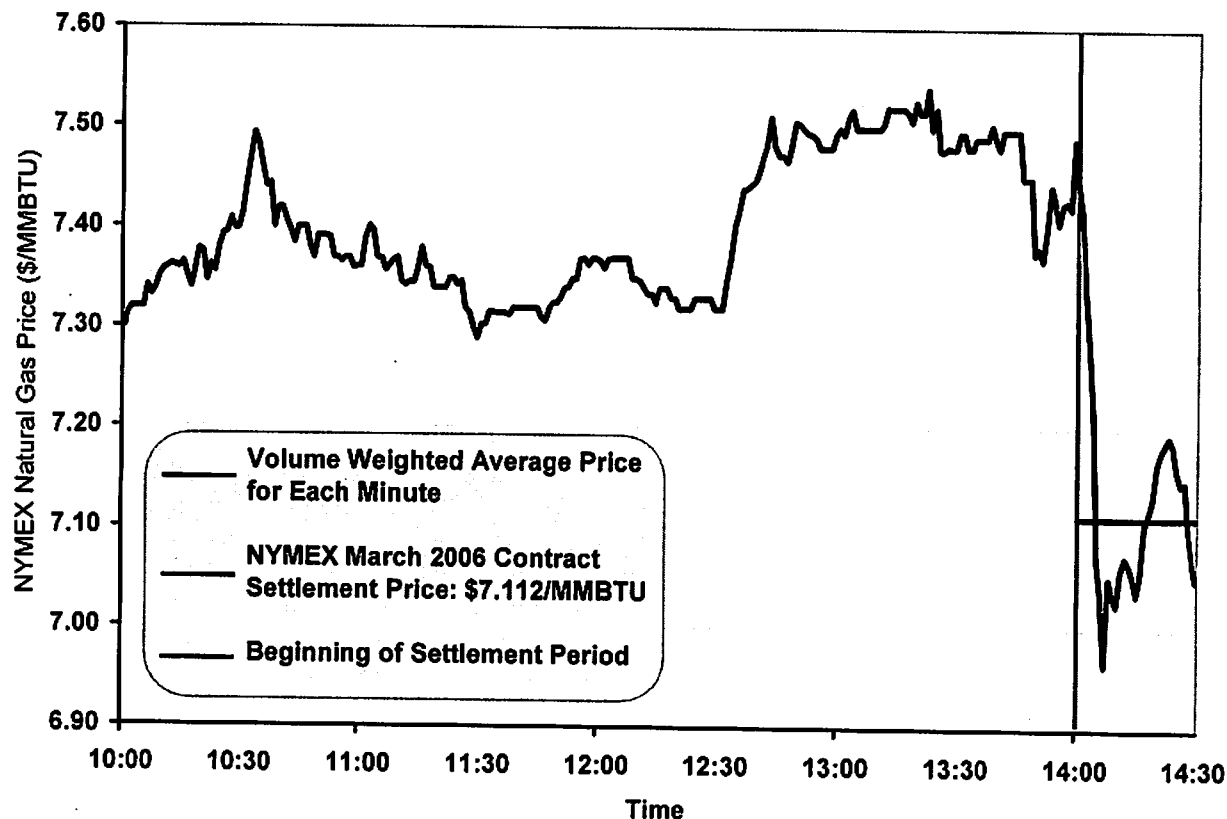
⁵⁵ STAFF OF S. PERMANENT SUBCOMM. ON INVESTIGATIONS, COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS, 110TH CONG., EXCESSIVE SPECULATION IN THE NATURAL GAS MARKET at 58 (2007) (quoting JPMorganChase, CP Leveraged Funds Due Diligence, Annual Review 2005, JPM-PS1 0007051).

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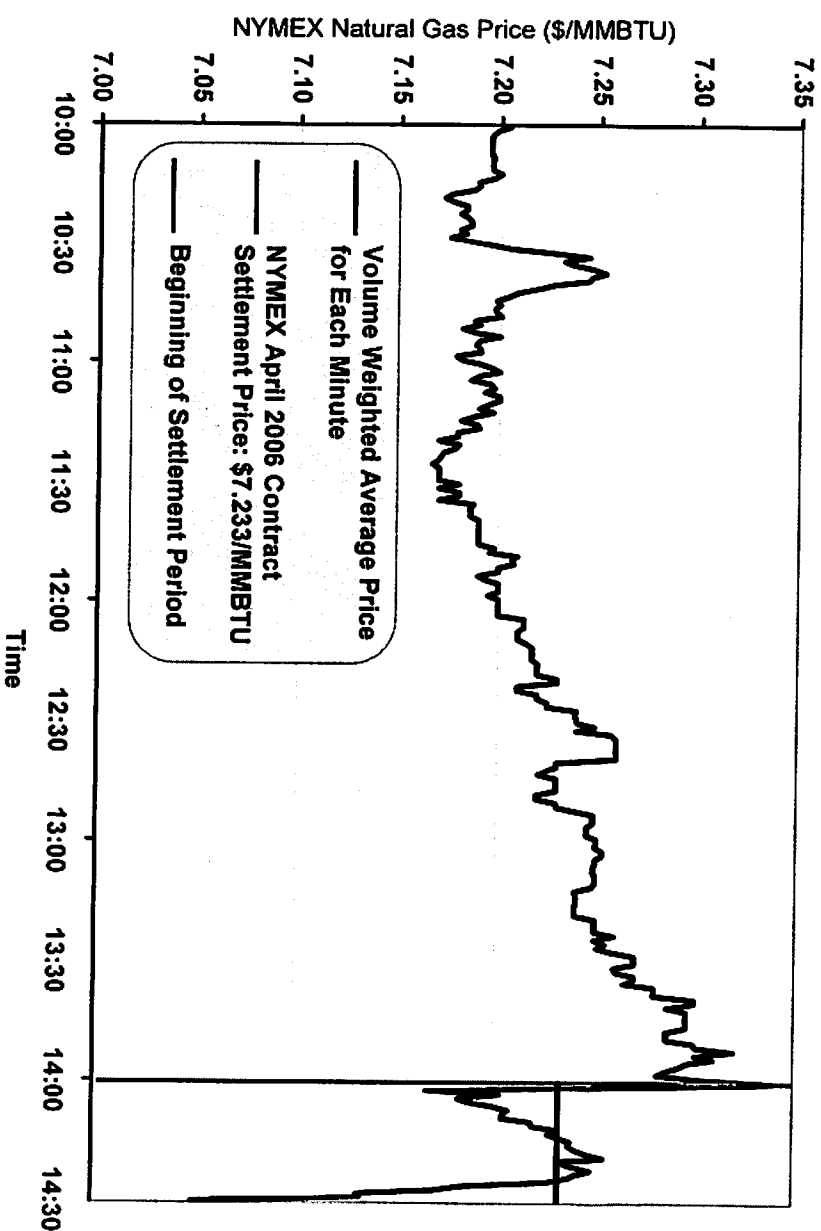
useful to review the price evolution of these contracts over the course of the termination days. The price points during the three trading days and other relevant information are presented in three figures below.

Figure 2: NYMEX Trading on March 2006 Contract Termination, February 24, 2006⁵⁶

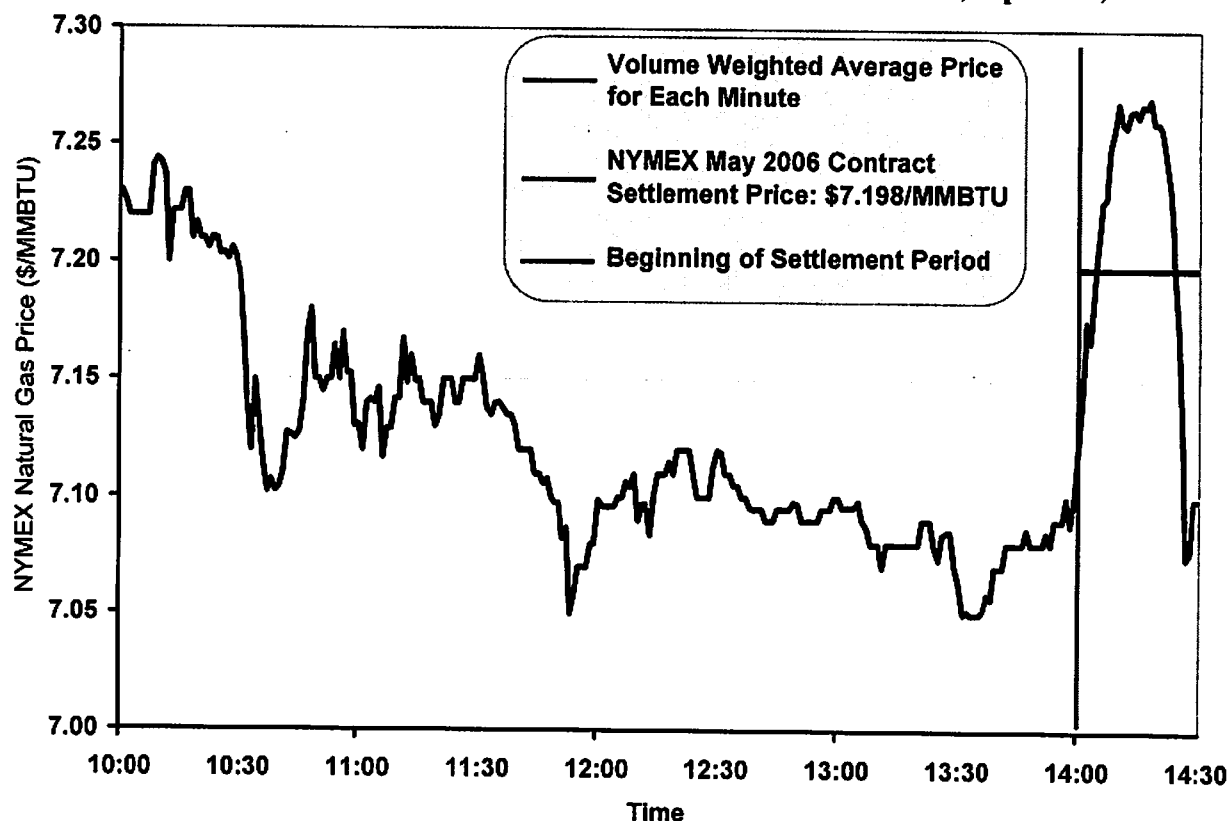


⁵⁶ NYMEX_00003 (NYMEX NG Futures Contract trade data).

Figure 3: NYMEX Trading on April 2006 Contract Termination, March 29, 2006⁵⁷



⁵⁷ NYMEX_00004 (NYMEX NG Futures Contract trade data).

Figure 4: NYMEX Trading on May 2006 Contract Termination, April 26, 2006⁵⁸

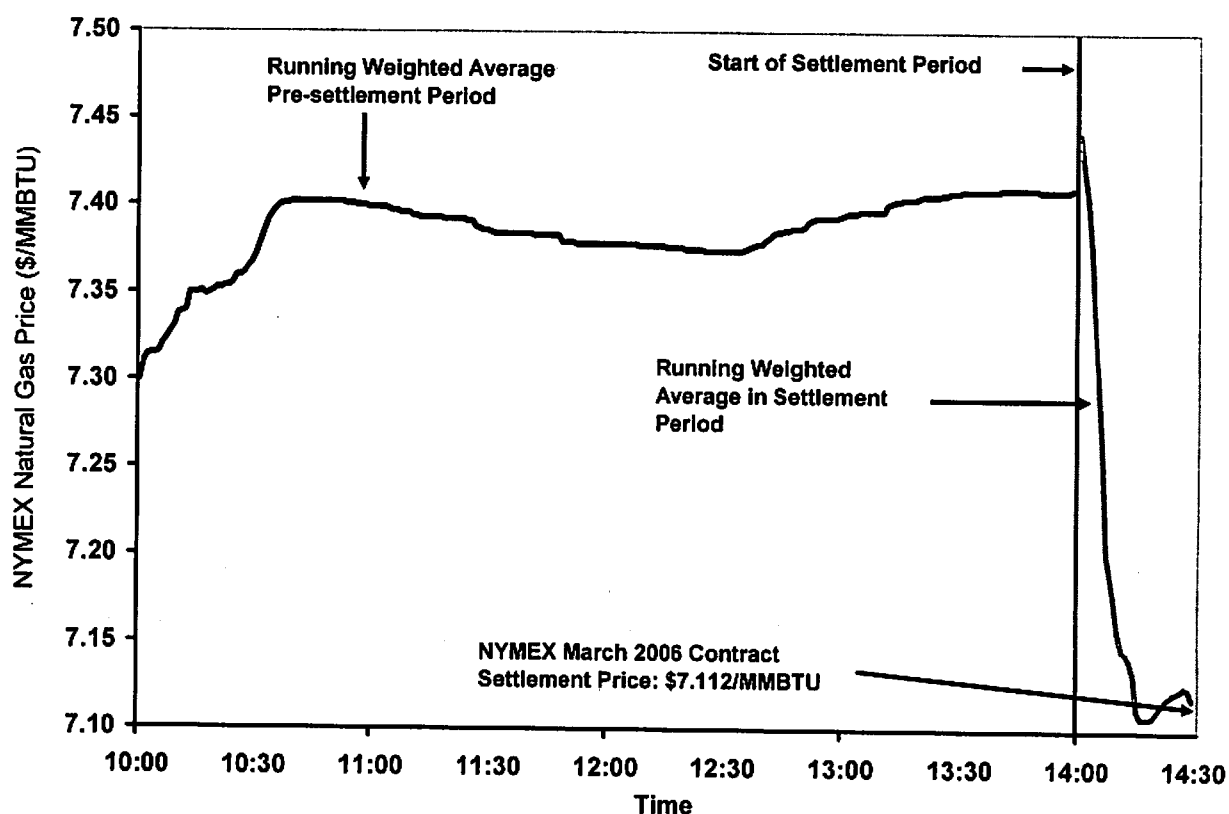
42. As these graphs show, there were significant alterations in the trajectory of the prices starting more or less at the start of the settlement period (although the direction and consistency of that change was not always the same). The coincidence of the shift in trajectory with the start of the settlement period and the departure of the settlement period prices from the rest-of-day trading is especially stark for the March contract, for which prices were in the range of \$7.28 to \$7.55 during the day (and closer to \$7.50 in the hours prior to settlement), but then dropped dramatically in the first five minutes of the settlement. The contract settled at just over \$7.11. In addition, the trading in the May contract seems anomalous: a sharp increase in prices at the start of the settlement period was followed by a marked decline.

43. An even more telling view of the activity is the running weighted average of prices which reveals how the volume of each sale combined with the price paid affected what would ultimately become the 30-minute weighted average. For example, Figure 5 below shows for the March 2006 contract (to the left of the vertical red line) the running

⁵⁸ NYMEX_00001 (NYMEX NG Futures Contract trade data).

weighted average of prices during the settlement day up to the settlement period. To the right of the red line is a running weighted average of sales in the settlement period. Had a settlement price been calculated based on selling up to the settlement period, the settlement price would have been about \$7.42, but instead the contract settled at \$7.112.

Figure 5: March Contract Volume-Weighted Average Price on February 24⁵⁹



II. The Nature and Scope of the Violations

A. Commission Jurisdiction and the Anti-Manipulation Rule

44. The Commission's Anti-Manipulation Rule, section 1c.1 of the Commission's regulations, implements section 315 of EAct 2005,⁶⁰ and prohibits:

⁵⁹ NYMEX_00003 (NYMEX NG Futures Contract trade data).

any entity, directly or indirectly, in connection with the purchase or sale of natural gas . . . subject to the jurisdiction of the Commission . . . [from using] . . . any device, scheme, or artifice to defraud [or from engaging in] any act, practice, or course of business that operates or would operate as a fraud or deceit . . . on any person.⁶¹

In adopting this rule, we issued Order No. 670 and therein clarified the following elements of a manipulation claim: “an entity: (1) . . . engages in any act, practice, or course of business that operates or would operate as a fraud or deceit upon any entity; (2) with the requisite *scienter*; (3) in connection with the purchase or sale of natural gas . . . subject to the jurisdiction of the Commission.”⁶² This case presents the first exercise of this new anti-manipulation authority. Accordingly, commentary about some of its elements, as relevant to the facts of this case, is appropriate.

45. The Anti-Manipulation Rule is an intentionally broad proscription against all kinds of deception, manipulation, deceit and fraud.⁶³ In Order No. 670, we explained that fraud is defined generally to include “any action, transaction, or conspiracy for the purpose of impairing, obstructing or defeating a well-functioning market.”⁶⁴ The body of precedent interpreting SEC Rule 10b-5 and section 10(b) of the Exchange Act upon which some of the elements of Rule 1c.1 were modeled makes plain that Rule 1c.1 covers manipulative conduct implemented, as here, by means other than material misrepresentations or omissions. The Supreme Court has defined market manipulation under Rule 10b-5 as conduct “designed to deceive or defraud investors by *controlling or artificially affecting* the price of securities”⁶⁵ or practices that “artificially affect market

⁶⁰ EPLA 2005 § 315 (2005) (codified at 15 U.S.C. 717c-1).

⁶¹ 18 C.F.R. § 1c.1 (2006).

⁶² *Prohibition of Energy Market Manipulation*, Order No. 670, 71 Fed. Reg. 4244 (Jan. 26, 2006), FERC Stats. & Regs. ¶ 31,202, at P 49 (2006) (Order No. 670).

⁶³ Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 50.

⁶⁴ *Id.* (citing *Dennis v. United States*, 384 U.S. 855, 861 (1966) (noting that fraud within the meaning of a statute need not be confined to the common law definition of fraud: any false statement, misrepresentation or deceit)).

⁶⁵ *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 199 (1976) (emphasis added).

activity.”⁶⁶ In particular, practices such as attempting to or actually “marking the close,” by which a manipulator seeks to alter normal market operations by sales targeted at the close of exchange trading, are prohibited.⁶⁷ Just as in the securities markets, energy market participants may be deceived or defrauded where one market participant trades with the intent to artificially affect the price of a physical or financial energy product and has the ability to do so, due to its relative size in the market or through explicit or tacit coordination with other traders. In the presence of such manipulative trading, the price is no longer set solely by the legitimate forces of supply and demand.

46. With respect to the “subject to the jurisdiction of the Commission” element, Section 1(b) of the NGA grants the Commission jurisdiction over “the sale in interstate commerce of natural gas for resale.”⁶⁸ The NGPA⁶⁹ and the Wellhead Decontrol Act of 1989⁷⁰ exclude from the Commission’s NGA jurisdiction all “first sales,”⁷¹ which are all sales from the producer to the consumer, unless and until the gas is purchased by an interstate pipeline, intrastate pipeline, or local distribution company or an affiliate thereof.⁷²

47. As noted *supra*, trading in the NG Futures Contract sets the settlement price for physical gas that “goes to delivery” and also determines the price for physical basis transactions which account for the vast majority of bid week transactions in the East, Upper Midwest and Gulf Coast market centers. These physical basis transactions during bid week, in turn, determine the monthly index prices for these locations and thereby the

⁶⁶ *Santa Fe Indus., Inc. v. Green*, 430 U.S. 462, 476 (1977).

⁶⁷ See *In re Kocherhans*, No. 3-8611, 52 S.E.C. 528, 530, 1995 SEC LEXIS 3308, at *6 (Dec. 6, 1995) (defining manipulation through “marking the close” as “the practice of attempting to influence the closing price of a stock by executing purchase or sale orders at or near the close of the market”); *SEC v. Schiffer*, Fed. Sec. L. Rep. (CCH) P90,247, 1998 U.S. Dist. LEXIS 8579, at *26 & n.26 (Jun. 11, 1998) (finding *prima facie* showing of manipulation through marking the close).

⁶⁸ 15 U.S.C. § 717(b) (2000).

⁶⁹ 15 U.S.C. §§ 3301 *et seq.* (2000).

⁷⁰ Pub. L. No. 101-60, 103 Stat. 157 (1989).

⁷¹ Commodity Exchange Act, 15 U.S.C. § 3431(a) (2000) (CEA).

⁷² 15 U.S.C. § 3301(21)(A) (2000).

prices for the larger volume of sales based on the index price. A substantial proportion of the foregoing are Commission-jurisdictional sales for resale in interstate commerce and not first sales.

48. We do not have jurisdiction directly to regulate trading in the NG Futures Contract that does not affect our jurisdictional markets; that is the province of the Commodity Futures Trading Commission (CFTC). However, the law makes plain that the jurisdiction of the two agencies is to be complementary.⁷³ Where the two regulatory regimes overlap, courts have concluded that Congress intended that both should be given effect. For example, in *United States v. Reliant Energy*,⁷⁴ the court concluded that the Commission's exclusive jurisdiction under the FPA to regulate the transmission and sale at wholesale of electricity in interstate commerce did not preempt the CFTC's anti-manipulation jurisdiction to pursue criminal charges for manipulation of electricity prices during California's energy crisis in summer 2000.⁷⁵ Indeed, Congress directed in EPAct 2005 that the two Commissions execute a Memorandum of Understanding (MOU) to establish, among other things, provisions ensuring that investigations pertaining to markets within the respective jurisdiction of each agency are properly coordinated to minimize duplicative information requests, provide for adequate protection of proprietary trading information, and the like.⁷⁶ On October 12, 2005, the Commission and the CFTC

⁷³ CEA, 7 U.S.C. § 2(a)(1)(A) (2000) (providing that CFTC "exclusive" jurisdiction is not to be read to interfere with separate jurisdiction granted to other federal agencies).

⁷⁴ 420 F. Supp. 2d 1043 (N.D. Cal. 2006); *see also SEC v. Hopper*, 2006 U.S. Dist LEXIS 17772, Fed. Sec. L. Rep. (CCH) P93,878 (S.D. Tex. 2006) (court rejected defendants' argument that SEC could not sanction energy trader for "round-trip" trading because such energy trading fell within exclusive jurisdiction of the Commission and the CFTC because the transactions were fraudulent and deceptive within the meaning of Rule 10b-5).

⁷⁵ *Reliant Energy*, 420 F. Supp. 2d at 1045 (*quoting United States v. Borden Co.*, 308 U.S. 188, 198 (1939) ("[I]t is a cardinal principle of construction that ... when there are two acts upon the same subject, the rule is to give effect to both" and "Congressional intent behind one federal statute should not be thwarted by the application of another federal statute if it is possible to give effect to both laws.")).

⁷⁶ EPAct 2005 §§ 316, 1281 (codified at 15 U.S.C. §§ 717t-2(c)(1) (2005) and 16 U.S.C. §824t(c)(1) (2005)).

entered into the MOU⁷⁷ and pursuant to its provisions, as discussed more fully *infra*, the staffs of the two agencies have worked closely together for more than a year to coordinate discovery and the proceedings in this case. In short, CFTC has jurisdiction over trading on its regulated exchanges, we have jurisdiction over certain types of natural gas and electric markets, and where these markets are interconnected, both agencies have jurisdiction to prohibit market manipulation.

49. In Order No. 670, we interpreted the statutory phrase “any entity” (which is repeated in the Rule) to cover not just companies that have traditionally been subject to Commission jurisdiction (such as natural gas pipeline companies or public utilities), but also to include any company or firm, and natural persons as well⁷⁸ who, “intended to affect, or have acted recklessly to affect, a jurisdictional transaction.”⁷⁹ Thus, while the Commission is not authorized to regulate all commodities trading behavior by any person or company, the Anti-Manipulation Rule prohibits manipulation of the physical and financial natural gas markets by any entity if the manipulative trading, whether intentionally or recklessly, also affects Commission-jurisdictional transactions, such as physical basis transactions and transactions based off indices calculated using physical basis transactions that are not “first sales.”

50. With respect to the *scienter* requirement, in Order No. 670 we stated that for the Anti-Manipulation Rule to apply “the entity must have intended to affect, or have acted recklessly to affect, a jurisdictional transaction.”⁸⁰ With respect to the “in connection with” requirement, Rule 1c.1 applies where there is a “nexus” between the manipulative conduct and the jurisdictional transaction.⁸¹ Given that the application of these elements to any case will almost always be particularly fact-bound, we will discuss the contours of these elements in greater detail *infra*, in the context of the facts of this particular case.

⁷⁷ See Memorandum of Understanding Between the Federal Energy Regulatory Commission (FERC) and the Commodity Futures Trading Commission (CFTC) Regarding Information Sharing and Treatment of Proprietary Trading and Other Information, executed October 12, 2005.

⁷⁸ Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 2, 18.

⁷⁹ *Id.* at P 22.

⁸⁰ *Id.* (emphasis added).

⁸¹ See *id.* at P 16.

51. The direction in which the manipulative conduct moves the price is immaterial to its legality. Courts routinely find that a downward manipulation violates section 10(b) of the Exchange Act and SEC Rule 10b-5.⁸² In such cases, the conduct is manipulative because it “creat[es] a false impression of supply and demand”⁸³ Courts have emphasized that defendants’ “[f]ailure to disclose that market prices are being artificially depressed operates as a deceit on the market place and is an omission of a material fact.”⁸⁴ Similarly, courts and the CFTC have condemned downward manipulations under the CEA.⁸⁵ The downward manipulation that occurred in *Avista* is of particular relevance to the instant case. There, the CFTC found that Avista Energy engaged in a manipulative scheme to drive down the settlement price of NYMEX electricity futures contracts to increase the value of its positions in over-the-counter (OTC) derivative contracts.⁸⁶ The academic literature takes a similar view, making no distinction between the harms resulting from upward or downward manipulations. These harms may include: deadweight losses due to distortions in consumption, production, storage, and transportation, as well as a reduction in hedging effectiveness, and a decline in market

⁸² See, e.g., *Internet Law Library, Inc. v. Southridge Capital Mgmt., LLC*, 223 F. Supp. 2d 474 (S.D.N.Y. 2002); *Compudyne Corp. v. Shane*, 453 F. Supp. 2d 807 (S.D.N.Y. 2006); *HealthExtras, Inc. v. SG Cowen Secs. Corp.*, 2004 U.S. Dist. LEXIS 698 (S.D.N.Y., Jan. 20, 2004), *United States v. Regan*, 937 F.2d 823 (2d Cir. 1991); *Nanopierce Tech. v. Southridge Capital Mgmt., LLC*, 2002 U.S. Dist. LEXIS 24,049 (S.D.N.Y. Oct. 10, 2002) (*Nanopierce*); *SEC v. Parnes*, 2001 U.S. Dist. LEXIS 21722 (S.D.N.Y. Dec. 26, 2001).

⁸³ *Nanopierce*, 2002 U.S. Dist. LEXIS 24,049, at *30.

⁸⁴ See, e.g., *United States v. Charnay*, 537 F.2d 341, 351 (9th Cir. 1976).

⁸⁵ See, e.g., *Strobl v. New York Mercantile Exch.*, 582 F. Supp. 770 (S.D.N.Y. 1984), *aff’d*, 768 F.2d 22 (2d Cir. 1984) (condemning under the Sherman Act and the Commodity Exchange Act a conspiracy by potato processors to artificially reduce the price of potato futures contracts); *In re Avista Energy, Inc.*, CFTC Docket No. 01-21, 2001 CFTC LEXIS 107 (Aug. 21, 2001) (*Avista*); see also *In re Anthony J. Diplacido*, Comm. Fut. L. Rep. (CCH) ¶ 29,866 (Sept. 14, 2004); *In re Taylor*, Comm. Fut. L. Rep. (CCH) ¶ 29,594 (Sept. 30, 2003).

⁸⁶ *Avista*, 2001 CFTC LEXIS 107, at *5-*6.

liquidity.⁸⁷ In sum, whenever manipulation results in markets that function other than on the basics of supply and demand, harm to the market participants results.

B. Staff's Investigation

52. Staff of the Office of Enforcement's Division of Energy Market Oversight (DEMO) includes advisors and analysts who have prior experience in the relevant markets, including actual open outcry trading in futures contract pits, as well as transactions in the wholesale physical natural gas markets. DEMO has routinely reviewed NG Futures Contract settlement prices in recent years. During trading for the last half hour of the May 2006 NG Futures Contract on April 26, 2006, DEMO staff observed in real time the sharp rise in price followed by the sharp decline during the last half-hour of trading, which resulted in a 10-cent increase in the settlement price for the May NG Futures Contract compared to where the contract had traded for most the day prior to termination. DEMO then reviewed and conducted a comprehensive comparative analysis of data on prior settlements going back several years. DEMO advised the Commission of its observations and referred the matter to staff of the Office of Enforcement's Division of Investigations (Investigations).

53. On May 2, 2006, Investigations requested from the CFTC, under the Commission's MOU with the CFTC (adopted pursuant to the requirements of EAct 2005⁸⁸), data necessary to identify the entities with the largest positions and trading volume in the May NG Futures Contract. The data showed that Amaranth was, by far, the largest seller in that termination. Subsequently, staff sought a broader data set and, after further analysis, on June 30, 2006, under the authority delegated to the Director of Enforcement or her designee,⁸⁹ the Director of Investigations initiated a non-public, preliminary investigation under Part 1b of the Commission's regulations into suspicious trading in NG Futures Contracts during settlement periods. Staff obtained further data from the NYMEX and the Amaranth Entities were identified as having engaged in seemingly suspicious trading in several contract months in early 2006. Over the ensuing months, Investigations obtained from the Respondents (as well as others) trade and position data, memoranda, reports, e-mails, IMs, and tape recorded telephone

⁸⁷ Stephen Craig Pirrong, *Manipulation of Cash-Settled Futures Contracts*, 74 J. BUS. 221 (2001).

⁸⁸ EAct 2005 § 316 (2005) (codified at 15 U.S.C. 717t-2(c)(1)).

⁸⁹ 18 C.F.R. § 375.314 (2006).

conversations, as well as the sworn testimony of over fifteen witnesses including all of the identified principals of the Amaranth Entities and each of the individual Respondents.

54. Staff also retained the services of an outside consulting expert Dr. Wincenti (Vince) Kaminski who conducted econometric analyses and a general review of the record which provided an independent review of staff's analysis and, ultimately, gave him a strong basis to conclude that manipulation occurred (see further discussion *infra*).⁹⁰ Based on his academic credentials and professional experience, Dr. Kaminski is a useful and credible source for an opinion on these matters. Dr. Kaminski worked with staff in the following areas: (1) general characterization of the relevant markets; (2) independent (blind) validation of staff's screening for and selection of investigation targets based on trading behavior; (3) review and characterization of the complete Amaranth portfolio, as to possible motives, conduct, intent and benefit from the suspect trading activity; (4) review of the evidence and testimony gathered, and (5) understanding the dynamics of trading in the NYMEX pit during the settlement period and how the behavior of one or a small group of traders can influence the rest of the market. He also conducted market share, concentration, multiple regression, and other econometric analyses in order to assess Amaranth's ability to impact, and estimate its actual impact on, the settlement price.

55. Staff's investigation was heavily coordinated with an investigation opened subsequently by the CFTC, the exclusive direct regulator of the NYMEX. As contemplated by the MOU, the staffs of the two agencies regularly coordinated their discovery efforts including participating jointly in depositions, sharing documentary evidence and conferring jointly with both inside and outside experts. Staff also coordinated with the Securities and Exchange Commission and other government agencies who have examined various regulatory aspects of Amaranth's activities. Coordination of this sort of case is, we believe, what Congress intended given the increasing interrelationship between the physical and financial energy markets. CFTC has exclusive jurisdiction over the operation of exchanges such as NYMEX, we have

⁹⁰ Dr. Kaminski is a world renowned expert in the field of energy trading and applied mathematics and economics. His more recent publications include ENERGY MODELING: ADVANCES IN THE MANAGEMENT OF UNCERTAINTY (2005) and MANAGING ENERGY PRICE RISK: THE NEW CHALLENGES AND SOLUTIONS (2004). He is currently on the faculty of the business school at Rice University. Prior to that, he spent a career in various energy trading operations leading sophisticated quantitative analysis teams, and he recently was consulted by a Congressional committee as to the functioning of the natural gas markets and testified before the Senate Committee on Homeland Security and Governmental Affairs Permanent Subcommittee on Investigations on June 25, 2007.

exclusive jurisdiction over the physical wholesale gas markets described above, and both agencies have jurisdiction where, as here, the manipulations are connected to both markets.

56. Each of the Respondents, prior to the issuance of this Order, was notified of Staff's conclusions that form the basis for this Order and were given multiple opportunities to address those conclusions, in writing and otherwise.

C. Amaranth's Manipulation of the March, April, and May 2006 NG Futures Contracts on February 24, March 29, and April 26, 2006

57. We preliminarily find that Amaranth's head natural gas trader, Hunter, along with his execution trader, Donohoe, manipulated the settlement price of the NG Futures Contract for the March 2006, April 2006, and May 2006 contracts, by holding the Amaranth Entities' NG Futures Contract positions open until the beginning of the settlement periods on February 24, March 29, and April 26, 2006, then liquidating the positions by selling during the settlement period. The traders sought to influence the settlement price in order to benefit their positions in financially-settled swaps and options.

58. Before embarking on the discussion of Amaranth's trading, it is important to emphasize that the Commission does not consider high volume trading during the settlement period alone to be illegal or manipulative. Nor is it illegal to possess a large share of trading activity, to engage in speculation, or to wrongly predict the direction of markets. However, where a firm uses some combination of market power and trading activity, against economic interest in one sector, in order to benefit its position in a related financial instrument by artificially moving the price, the firm likely crosses the line into the realm of manipulation. Our preliminary conclusion here is based on all of the facts and circumstances of the case, including, as discussed more fully below: the fact that Amaranth traded in a manner that had the effect of driving down the NG Futures Contract settlement price; its aggregate natural gas position in the prompt month and prompt next; the manner and timing of the building of these positions in the days leading up to the settlement periods; and, contemporaneous documents in which Hunter and Donohoe outlined their plan to trade in the settlement period and the strong circumstantial evidence as to motive and intent that can be drawn from the sequence, pinpoint timing, and language of these documents.⁹¹

⁹¹ See Order No. 670, FERC Stats. & Regs. ¶ 31,202 at P 50 ("Fraud is a question of fact that is to be determined by all the circumstances of a case."); *Herman & MacLean v. Huddleston*, 459 U.S. 375, 391 n.30 (1983) ("The Court of Appeals also noted that the
(continued)

59. Nevertheless, high-volume trading during the settlement period is one factor (among many) that lead us to conclude that Amaranth had a manipulative intent for trading during the settlement periods identified above. Most traders normally try to avoid trading in large volumes during this period due to a number of risks. First, liquidity (*i.e.*, the amount of “open interest”) is diminishing rapidly as most traders close out their positions well in advance of the termination day, and in particular the final thirty minutes. There are only a limited number of futures market participants that are also active in the physical markets and thus have the ability to make or take physical delivery. For a purely financial player (such as Amaranth), the risks of failing to close out the position are thus magnified, when compared with those faced by physical players.

60. Moreover, errors in monitoring the position in the prompt-month NG Futures Contract can result in unwanted physical delivery obligations, so traders want to be “out” well before the close to allow time for confirmation and reconciliation of trade capture systems so that any errors can be corrected if necessary before the close of trading.⁹² The spread between bids and offers (*i.e.*, difference between the price sellers are asking for and the price that buyers are willing to pay at a given moment) as well as the spreads (*i.e.*, difference) between the prompt-month NG Futures Contract and a later-month NG Futures Contract or related instruments such as swaps or an “exchange of futures for

proof of scienter required in fraud cases is often a matter of inference from circumstantial evidence. If anything, the difficulty of proving the defendant's state of mind supports a lower standard of proof. In any event, we have noted elsewhere that circumstantial evidence can be more than sufficient.”); *see also TSC Indus., Inc. v. Northway, Inc.*, 426 U.S. 438, 463 & n. 24 (1976) (stating that a showing of market manipulation “may be by circumstantial as well as direct evidence, and the purchases themselves may be considered”).

⁹² In fact, in the Autumn of 2005 Amaranth made a significant error of this sort, which obligated it to take delivery of 100 to 200 contracts. After this costly error, Amaranth required all traders to transfer their position in the prompt-month NG Futures Contract to a single trader (Donohoe) during the days immediately preceding the settlement day, and Donohoe was responsible for exiting these positions. Hunter Dep. 51:15-52:10 (June 15, 2007); Donohoe Dep. 44:17-47:13 (Mar. 14, 2007 morning session); Arora Dep. 29:19-30:24 (Nov. 14, 2006 afternoon session); Carrieri Dep. 31:9-32:7 (May 15, 2007). As will be discussed below, this concentration of the prompt-month NG Futures Contract position in the hands of one trader on the termination day facilitated the manipulation.

swaps” (EFS) can be substantial and highly volatile during the settlement period. As Arora testified:

[A]s you get closer expect more volatility and liquidity is usually more difficult. Or things get more volatile and the liquidity profiles change. You have lesser time. . . . As I mentioned to you, that is taking your contract too -- taking your position . . . which you do not intend to take or make delivery too close out there and be exposed to the last minute changes to spreads.⁹³

61. Concentrated buying or selling in the settlement period could move prices up or down, respectively, either as a result of: (i) the sheer volume of contracts traded, conferring a transitory, but nevertheless meaningful “market power;” (ii) unilateral manipulative floor trading practices (*e.g.*, instructing or positioning the floor broker to signal to other floor brokers the plan so as to boost the market-moving effect); or (iii) explicit or tacit collusion (*e.g.*, with other traders who recognize the manipulator’s intent and want to help him move the market with tag-along benefits to their own positions). In any case, for such a strategy to have a significant impact on the settlement price, which is a volume-weighted average, a would-be manipulator would have to account for, or propagate, a significant portion of the trading volume during some portion of the settlement period and the market would have to be fairly concentrated for some portion of the settlement period.

62. If trading in the NG Futures Contract were considered in isolation, the above manipulative strategy would typically be self-defeating. Concentrated selling of the NG Futures Contract to liquidate a long position (or buying to liquidate a short position) would normally reduce the value received, so that the overall payoff would always be less than that from a non-manipulative, price-taking strategy. However, such a strategy could be profitable to a trader who has set up its portfolio with *opposing* swap or physical positions that are much greater in scale (highly leveraged) than the NG Futures Contract position so as to benefit from these otherwise adverse movements in the NG Futures Contract. We preliminarily find that this is the calculation and strategy the Respondents employed.

⁹³ Arora Dep. 44:16-19, 45:21-24 (Nov. 14, 2006 afternoon session); *see also* Lee Dep. 57:23-58:12 (Mar. 21, 2007 morning session) (discussing heightened volatility and other dangers of trading during close); Bolling Dep. 76:4-24 (June 29, 2007) (same).

1. Trading on February 24, 2006: “*Bit of An Experiment Mainly*”

63. The evidence of Amaranth’s manipulation is clearest with respect to its trading on February 24, 2006, relating to the settlement of the March 2006 NG Futures Contract. Notably, this was the first time that the firm traded more than a few hundred contracts in any settlement day and the first time it traded a large number of contracts in the 30-minute settlement period. At roughly 10:00 a.m. on that day, Amaranth’s Greenwich headquarters advised Hunter and Donohoe in an e-mail that they were short (1,729) futures contracts and to make sure that Amaranth is “flat by the end of the day today.”⁹⁴ In other words, Greenwich gave the unremarkable reminder to Calgary that the position should go to zero so as to avoid taking delivery. But Hunter and Donohoe had plans to do much more before going “flat by the end of the day.”

a. The Instant Messages

64. In this case, our inquiry is aided by the fact that Hunter and Donohoe were physically separated by half a continent in February 2006. Hunter was in Calgary, and Donohoe was in Greenwich. They chose to use instant messaging technology to communicate and effectuate their trading. Buried in the millions of bytes of instant message texts uncovered by staff are the clear signals of their manipulative scheme. In particular, in a series of instant messages from a 24-hour period in late February 2006 with other Amaranth traders (such as Donohoe and Calhoun) and traders at other firms (such as one Bart Glover of National Trading LLC with the IM handle “gloverb”), Hunter laid out his plan to manipulate the settlement price for the March NG Futures Contract by selling over 3,000 contracts “MoC” (market on close). “Market on Close” means to sell during the settlement period, or as one definition puts it “[a]n order to buy or sell at the end of the trading session at a price within the closing range of prices.”⁹⁵

65. The first hints of this strategy are contained in two instant message conversations between Hunter and Donohoe on February 23, the day before the termination day. First,

⁹⁴ AALLC_REG0672597 (February 24, 2006 E-mail from Michael Malach to Hunter and Donohoe, among others).

⁹⁵ CFTC Glossary, http://www.cftc.gov/opa/glossary/opaglossary_m.htm; *see also* definition used by Man Financial, one of the leading brokers at NYMEX, http://www.mandirect.com/Trading-Tools/order_entry.cfm (stating that a “Market on Close” order is “an instruction to fill the order, at market, but only in the closing range”).

at 2:58 p.m., Hunter tells Donohoe “ok – end of day tomorrow still stands.”⁹⁶ The meaning of this cryptic comment is apparently clarified at 3:39 p.m., when Hunter instructs Donohoe to “make sure we have lots of futures to sell MoC tomorrow.”⁹⁷ Hunter thus instructed Donohoe to buy a large number of March NG Futures Contracts before the close the next day so that Amaranth would have “lots” of NG Futures Contracts to sell MoC, that is, during the close. At the time Hunter made the statement, Amaranth had a short position of (1,729) March NG Futures Contracts.⁹⁸ Therefore, Amaranth would have had to buy only 1,729 March NG Futures Contracts if its objective was merely to go “flat by the end of the day today.” But, if it wanted to have “lots” of futures *to sell MoC*, it would have to buy *additional* contracts to build a long position. That is what it did. In fact, Amaranth bought in excess of 4,800 March NG Futures Contracts the next day, taking its position from short, past “flat” and then to long sometime around noon.

66. In a series of instant message exchanges during the mid-day of February 24, Donohoe gave Hunter periodic updates on his position in the March NG Futures Contract, and Hunter provided further detailed instructions on the implementation of their strategy. For example, in an instant message conversation beginning at 11:02 a.m. EST, Donohoe informed Hunter that he had already liquidated the short position of (1,729) March NG Futures Contracts and was by that point up to a long position of 2,111. Hunter then instructed Donohoe to further build his position to be long at least 3,000 contracts.⁹⁹ By 12:22 p.m., Donohoe had already achieved this goal, reaching a position

⁹⁶ AALLC_REG0684033. Given that the Hunter and Donohoe were in Calgary and Greenwich, respectively, and that this is the first mention of trading for the “end of the day tomorrow” in the instant messages, it appears that Hunter first laid out his strategy to Donohoe in a previous telephone conversation. Amaranth claims that it did not record any of its telephone lines, so we do not have any record of any telephone conversations laying out their plan.

⁹⁷ AALLC_REG0684056 (February 23, 2006 Instant Message between Hunter and Donohoe).

⁹⁸ AMARANTH_REG091722_pos0223.xls (Amaranth end of day position report for February 23, 2006); AALLC_REG0672597 (February 24, 2006 E-mail from Michael Malach to Hunter and Donohoe, among others).

⁹⁹ AALLC_REG0704803.

Donohoe: 11:02:52 i'm long 2111 fut

Hunter: 11:03:20 already?

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of long “3111 fut,” *i.e.*, March NG Futures Contracts. Donohoe then asked whether he should get more but Hunter told Donohoe that “that should be enough.”¹⁰⁰ Donohoe agreed not to trade any more March NG Futures Contracts until the settlement period, so that he could carry out Hunter’s previous instruction that all of these contracts were to be sold in the close.¹⁰¹

67. In the meantime, Hunter let Donohoe know he was “telling vinnie.”¹⁰² This is a reference to Hunter contacting Amaranth’s primary NYMEX floor brokerage firm, ALX Energy, Inc. (ALX), and specifically Vincent Rufa, one of ALX’s phone clerks.¹⁰³ Under all the circumstances, a fair inference is that Hunter called Rufa in order to advise him of Amaranth’s intentions so that when it came time to execute the trades, the broker would have considered, in advance, how to execute the order so as to maximize the intended effect.¹⁰⁴ We note that because Rufa had a strong professional and personal relationship

Donohoe: 11:03:43 vitol sold 2000

Hunter: 11:04:12 maybe get to 3000

Donohoe: 11:04:17 I can easily get 2000 or mor

¹⁰⁰ AALLC_REG0684197.

¹⁰¹ *Id.*

Donohoe: 12:22:03 3111 fut

Hunter: 12:26:17 that should be enough

Hunter: 12:26:23 getting them easy?

Donohoe: 12:26:35 yeah ... last 1500 on h/j roll

Donohoe: 12:26:42 vitol gave me 2000

Hunter : 12:32:20 telling Vinnie

Donohoe: 12:32:52 ok no more futures will be traded

¹⁰² *Id.*

¹⁰³ Rufa also traded for his own account and acted as a broker during the relevant time period. Rufa Dep. 19:19-23, 21:23-22:4 (Mar. 7, 2007).

¹⁰⁴ This inference is further justified by Rufa’s testimony indicating that he owed a certain loyalty to Amaranth – that he communicated conditions in the pit directly to either Hunter or Donohoe, and that he did so all day long. Rufa Dep. 28:10-29:14, 51:2-12 (Mar. 7, 2007). Said Rufa, “I would make sure the clients got information I thought they needed.” Rufa Dep. 22:5-7. Rufa has also passed on critical market intelligence to market participants in the past, such as the identity of a buyer or seller. Hunter Dep. at 169:3-21 (June 15, 2007).